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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/828,093	04/06/2001	Tetsuji Mitsumoto	4296-135 US	5491

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100 THANET CIRCLE, SUITE 306  
PRINCETON, NJ 08540

EXAMINER

MANOHARAN, VIRGINIA

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 02/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/828,093	Applicant(s) MITSUMOTO ET AL.	
	Examiner Virginia Manoharan	Art Unit 1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 15 November 2004.  
 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-17 and 19 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 1,2,4-17 and 19 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:  
         1. ☐ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

The drawings are objected to under 37 CFR 1.83 (a) for the same reasons as set forth at the second full paragraph, page 2 of the previous Office Action.

While the "joint part" and the "fixing part" may be shown in the drawings as alleged by applicants, however, they are not identified by reference numerals in the specification and drawings?

It is also noted that Figures 1-4 are indicated, e.g., at page 4, lines 9-20 of the specification, as being "conventional" and therefore should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 1-2, 4-8, 10-17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over US. Patent No. 6,214,174 to Matsumoto et al with or without U.S. Patent No. 4,304,738 to Nutter.

The above references are applied for the same reasons as set forth at the paragraph bridging pages 4 & 5 of the previous Office Action.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al (6,214,174) and Matsumoto et al (6,641,700).

The above references are applied for the same combined reasons as set forth at page 5, second to the last paragraph, of the previous Office action.

Applicants' arguments filed November 15, 2004 have been fully considered but they are not persuasive.

Applicants' arguments that "... there is no teaching or suggestion in Matsumoto et al. '174 of providing liquid passing opening in the joint part between the support ring and the inner wall for preventing polymerization on the inner wall of the distillation column. ... Further, with regard to claims 4, 15 and 19, Matsumoto et al. '174 do not teach or suggest a liquid passing opening provided in a fixing part between the tray and the support ring...." are not considered well-taken.

While Matsumoto et al did not specifically mention the argued liquid passing openings in the joint part between the support ring and the inner wall; nor in the fixing part between the tray and the support ring, however, Matsumoto's disclosure at col. 4, lines 47-56 would at least be suggestive of the above argued limitations. That is, Matsumoto's suggestion that the liquid hole 8 forming at least at a position such that

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the tray 1 does not cover the whole part of the liquid hole 8 allowing the liquid to smoothly flow down from surfaces of the tray 1 and the tray supporting member...” would presupposed positioning the liquid openings at least where effective results are obtained.

Furthermore, Nutter was not cited to teach or suggest providing liquid passing openings in the joint part between the support ring and the inner wall for preventing polymerization on the inner wall of the distillation column, as argued, but was applied to teach that the claimed dual flow tray is known in the art. Moreover, applicants fail to distinguish how the claimed splash plate differs structurally from the baffle plate of the prior art to Matsumoto '700. The plate of the prior art is deemed capable of performing the same functions as the claimed plate as they both would constitute the same structures.

Thus, in the absence of anything which may be “new” or unexpected result”, a prima facie case of obviousness has been established by the art and has not been rebutted.

Unexpected results must be established by factual evidence. Mere arguments or conclusory statements in the specification, Mere arguments or conclusory statements in the specification, applicants' amendments, or the Brief do not suffice. In re Lindner, 457 F.2d 506, 508, 173 USPQ 356, 358 (CCPA 1972). In re Wood, 582, F.2d 638, 642, 199 USPQ 137, 140 (CCPA 1978).

It is suggested that incorporating the subject matter of claim 9 to claims 1 and 15 would place the case in condition for allowance.

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The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(a) Small discloses a disc equipped with a doughnut baffle.

(b) Gentry discloses a disk which corrects maldistribution of flow.

(C) Baird discloses an apparatus wherein the discs allow continual disruption of the vertical liquid film on the internal surface of the jacket.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Virginia Manoharan whose telephone number is 571-271-1450. The examiner can normally be reached on Tuesday-Friday from 7:30 am to 6:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

V. Manoharan/af  
February 10, 2005

  
SIGNATURE  
PRIMARY EXAMINER  
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